NEIU El Centro



Bird's Eye View

Architecture

- The building is located along the Kennedy Expressway and will be passed by over 400,000 Vehicles each day.
- Nearly the entire building is enveloped in a curtain wall façade.
- The curtain wall has fins that are designed to limit solar gains and control the amount of natural daylight entering the building.
- The fins appear gold when driving into the city and blue when leaving the city reflecting the school colors

Lighting & Electrical System

- Daylight sensors and occupancy sensors control the lighting levels
- Most of the lighting system consists of energy efficient fluorescent fixtures.
- The electrical system originates from a dedicated service room on the first floor (480V/277V, 3 phase, 4 wire)
- A photovoltaic array on the roof provides additional power to the building.

Chicago, Illinois

Project Overview

Occupant:	Northeastern Illinois University
Building Type:	Classrooms, labs, lounges, etc.
Size:	55,000 SF
Stories:	3 (No Basement)
Construction:	May 2013 – September 2014
Delivery:	Design-Bid-Build

Project Team

Architect:JGMALandscape Arch:Site Design GroupMEP Engineer:PrimeraStruct. Engr:ForefrontCivil Engineer:PrismConstr. Mngr.:N/A (Multiple Prime)

Structural System

- The building has no basement and the foundation consists of concrete footings and grade beams.
- The first floor is supported by a slab on grade
- The building is framed with ASTM A992 Grade 50 steel
- The floors are supported by a 20 gage composite metal deck with 4 ½" of concrete

Mechanical System

- The cooling and ventilation requirements of the building are served by two roof top air handling units.
- Each AHU is served by an air cooled condensing unit
- The AHU's serve the 71 VAV boxes located in the building.
- The buildings heating loads are served by two 750 MBH natural gas fired hot water boilers.
- The boilers serve hot water radiant finned tubes that are located along the perimeter of the building.



Student Lounge

Southwest Elevation

Michael Gramarossa | Mechanical Option | Advisor: Dr. Freihaut

www.engr.psu.edu/ae/thesis/portfolios/2014/mvg5182 | Images courtesy of JGMA